

## Health Advisory:

### Amebic Meningoencephalitis Linked to Improper Neti Pot Use

December 23, 2011

This document will be updated as new information becomes available. The current version can always be viewed at <http://www.health.mo.gov>

The Missouri Department of Health & Senior Services (DHSS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

**Health Alerts** convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

**Health Advisories** provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

**Health Guidances** contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

**Health Updates** provide new or updated information on an incident or situation; can also provide information to update a previously sent Health Alert, Health Advisory, or Health Guidance; unlikely to require immediate action.

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December 23, 2011

FROM: MARGARET T. DONNELLY  
DIRECTOR

SUBJECT: Amebic Meningoencephalitis Linked to Improper Neti Pot Use

Two people in Louisiana have died this year from primary amebic meningoencephalitis after using tap water to irrigate their sinuses with neti pots. *Naegleria fowleri*, a known cause of primary amebic meningoencephalitis (PAM), was implicated in both cases.

*N. fowleri* is an amoeba (single-celled living organism) which infects people by entering the body through the nose; it travels up the nose to the brain where it destroys the brain tissue.

*Naegleria* infection typically occurs when people go swimming or diving in warm freshwater lakes and rivers. In very rare instances, *N. fowleri* infections may also occur when contaminated water from other sources (such as inadequately chlorinated swimming pool water or heated tap water less than 116.6° Fahrenheit) enters the nose when people submerge their heads or when people irrigate their sinuses with devices such as a neti pot. Persons cannot be infected with *N. fowleri* by drinking water or swimming in a properly cleaned, maintained, and disinfected swimming pool.

Initial symptoms of PAM start one to seven days after infection as headache, fever, nausea, vomiting, and stiff neck. Later symptoms include confusion, lack of attention to people and surroundings, loss of balance, seizures, and hallucinations. The disease progresses rapidly and usually causes death within one to 12 days.

*N. fowleri* infections are very rare. According to the Centers for Disease Control and Prevention (CDC), in the 10-year period from 2001 to 2010, 32 infections were reported in the United States. Of those cases, 30 (93.8%) were infected by contaminated recreational water and 2 (6.2%) were infected by water from a geothermal drinking water supply.

#### Recommendations

- Irrigate, flush, or rinse the nose and sinuses (for example, with a neti pot) using distilled, sterile, or previously boiled water.
- Rinse the irrigation device (such as a neti pot) after each use and leave open to air dry.

Any questions should be directed to the Missouri Department of Health and Senior Services' (DHSS') Bureau of Communicable Disease Control and Prevention at 800/392-0272 (24/7).

Office of the Director  
912 Wildwood  
P.O. Box 570

Jefferson City, MO 65102  
Telephone: (800) 392-0272  
Fax: (573) 751-6041

Web site: <http://www.health.mo.gov>